

**REMARKS**

Claims 1-14 are pending in this application, of which claim 8 has been amended. Claims 1-7 and 11-13 are withdrawn from consideration. No new claims have been added.

Claims 8-9 and 14 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Applicants' Admitted Prior Art (hereafter, "APA") in view of Shiro (previously applied) and DE 10055101 to Warth (hereafter, "Warth").

Applicants respectfully traverse this rejection.

As noted in Applicants' response of July 21, 2006, Shiro discloses a metal mask for cream solder printing having either three circular holes in line all the same size, as shown in FIG. 1, or one large circular hole surrounded by four smaller holes, as shown in FIG. 2.

The metal mask of one embodiment of the present invention has two openings. On the other hand, the metal mask disclosed in Shiro has three or five openings.

The one large circular hole and four smaller second holes shown in FIG. 2 are not arranged on a line extending longitudinally of the lead member (not shown). The one large circular hole and one of the smaller holes are arranged on a line that forms an angle of 45 degrees with the longitudinal direction of the lead member. Although the large hole provides a solder joint with an increase strength, the side closer to the base end of the lead member than the solder joint will produce a solder joint with a lowered strength due to one of the second holes, because the one first hole is surrounded by the four second holes. This will result in great external force acting on the low-strength solder joint, so that the lead member will be easily removed from the

circuit board.

Warth has been cited for teaching a solder mask having a single elliptical hole.

In contrast to the teachings of Shiro and Warth, the metal mask (1) of the present invention has two openings (11a, 11b) having centers on a line extending longitudinally of the lead member (6) and formed within a region corresponding to the electrode (21) on the circuit board (2) to join the end portion of the lead member (6) and the first (11a) of the two openings (11a, 11b) which is positioned closer to said end portion of the lead member (6) is smaller than the other second opening (11b) in area.

Accordingly, claim 8 has been amended to recite these distinctions, and the 35 U.S.C. § 103(a) rejection should be withdrawn.

Claim 10 has been allowed.

In view of the aforementioned amendments and accompanying remarks, claims 8-13, as amended, are in condition for allowance, which action, at an early date, is requested.

If, for any reason, it is felt that this application is not now in condition for allowance, the Examiner is requested to contact applicants' undersigned attorney at the telephone number indicated below to arrange for an interview to expedite the disposition of this case.

U.S. Patent Application Serial No. **10/803,884**  
Response to Office Action dated October 23, 2006

In the event that this paper is not timely filed, Applicants respectfully petition for an appropriate extension of time. Please charge any fees for such an extension of time and any other fees which may be due with respect to this paper, to Deposit Account No. 01-2340.

Respectfully submitted,

ARMSTRONG, KRATZ, QUINTOS,  
HANSON & BROOKS, LLP

  
William L. Brooks

Attorney for Applicant  
Reg. No. 34,129

WLB/ak  
Atty. Docket No. **040132**  
Suite 1000  
1725 K Street, N.W.  
Washington, D.C. 20006  
(202) 659-2930



**23850**

PATENT TRADEMARK OFFICE